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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/733,579

12/12/2003

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Q77326

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23373 7590 04/18/2008  
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EXAMINER

AUSTIN, SHELTON W

ART UNIT

PAPER NUMBER

2623

MAIL DATE

DELIVERY MODE

04/18/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/733,579	<b>Applicant(s)</b> KIM, KYUNG-AH	
	<b>Examiner</b> SHELTON AUSTIN	<b>Art Unit</b> 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 7-21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robarts et al. (US 2005/0278741) in view of Lee et al. (US 6,463,428).

Regarding claims 1 and 11, Robarts et al. ("Robarts") teaches a content program information search system comprising:

a server (Fig. 3—42) logically connected to a first database (Fig. 3—EPG database 86) configured to store a plurality of search terms inputted from external devices (paragraph 48, 49 and 85); and

a digital signal receiver configured to detect and to display for a selected search term of the plurality of search terms at least one of a content signal and detailed content information from a digital signal transmitted from a transmitter (paragraph 77, 82),

wherein said server is configured to extract from the first database and to transmit to the transmitter at least one transmission search term of the plurality of search terms (paragraphs 47, 48 and 49).

Robarts, however, fails to clearly teach extracting and transmitting at least one search term based on an order of priority based on search frequency and said digital

signal receiver is configured to display in the order of priority the at least one transmission search term transmitted from the transmitter.

In analogous art, Lee et al. ("Lee") teaches extracting and transmitting at least one search term based on an order of priority based on search frequency and said digital signal receiver is configured to display in the order of priority the at least one transmission search term transmitted from the transmitter (col. 5, lines 1-16—extracted keywords could be ranked based on frequency in which the keyword appeared; col. 7, lines 19-29—server operating offsite through a link).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Robarts by extracting and transmitting at least one search term based on an order of priority based on search frequency and said digital signal receiver is configured to display in the order of priority the at least one transmission search term transmitted from the transmitter, as taught by Lee, in order make the number of possible keywords easier to handle and easier to select (Lee: col. 5, lines 1-5).

Regarding claims 2 and 13, Robarts teaches an internet service provider (Fig. 3—94) configured to provide a path to transmit the selected search term of the plurality of search terms from an external device of the external devices to the first database (paragraphs 52, 53 and 85), the external device being at least one digital signal receiver (Fig. 3—64) connected to said internet service provider.

Regarding claims 3 and 12, Robarts teaches wherein said digital signal receiver includes:

- a detector configured to detect the at least one transmission search term of the plurality of search terms from the digital signal (Fig. 3—74; paragraph 45);

- a list generator configured to generate a search term list by arrangement of the detected transmission search term (Fig. 6—202, 204, 206, etc.);

- a controller (Fig. 5—102; paragraph 63) configured to control display of the generated search term list if a user request for a search is inputted, and, if the selected search term is selected from the displayed search term list, to control the display of the detailed content information for the selected search term (Fig. 7; paragraph 82);

- a graphic engine configured to provide in a displayable form the search term list and the detailed content information for the selected search term according to control of said controller (Fig. 7—EPG graphical user interface);

- a display unit configured to display at least one of the search term list and the detailed content information provided by said graphic engine (Fig. 3—broadcast enabled personal computer); and

- a communication interface configured to transmit the selected search term to the first database (paragraph 53—back channel).

Robarts, however, fails to clearly teach generating a search term list based on the order of priority.

In analogous art, Lee teaches generating a search term list based on the order of priority (col. 5, lines 1-16—extracted keywords in the list could be ranked based on

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frequency in which the keyword appeared; col. 7, lines 19-29—server operating offsite through a link).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Robarts by generating a search term list based on the order of priority, as taught by Lee, in order make the number of possible keywords easier to handle and easier to select (Lee: col. 5, lines 1-5).

Regarding claims 4 and 18, Robarts teaches wherein said server further comprises a second database configured to store content program guide information including the detailed content information (Fig. 3—82, 80), the server configured to transmit to the transmitter the broadcast program guide information (paragraph 47) and the at least one transmission search term of the plurality of search terms according to the order of priority (paragraph 48 and 49).

Regarding claim 7, Robarts teaches an internet service provider (Fig. 3—94) providing a path for transmitting the selected search terms of the plurality of search terms transmitted from the external devices to the first database (paragraphs 52, 53 and 85), wherein at least one external device of the external devices is a terminal configured to input and to output data and is configured to be connected to said internet service provider (Fig. 3—66 and/or 68).

Regarding claim 8, refer to the rejections of claims 1 and 2.

Regarding claim 9, refer to the rejection of claim 3.

Regarding claim 10, Robarts teaches wherein the digital signal receiver is an internet-accessible web television receiver (Fig. 3—64, 94; paragraph 50—supplemental content can be web pages).

Regarding claim 14, Robarts teaches wherein the search mode is at least one of a search mode based on search frequency, a search mode based on a proper noun extracted from the content program guide information, a search mode based on an input text, and a search mode based on a program content category (paragraph 78—categories; paragraph 82—text search mode).

Regarding claims 15, 16 and 17, refer to the rejections of claims 1 and 2.

Regarding claims 19, 20 and 21, refer to the rejections of claims 1 and 2.

3. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robarts in view of Lee, as applied to claims 1, 3, 4 and 5 above, and further in view of Hori et al. (US 7,209,942).

Regarding claim 5, Robarts teaches wherein said detector is configured to detect the content program guide information from the digital signal (Fig. 3—program info), and if the user request for the search in at least one of a noun search mode based on a proper noun, a text search mode based on text input, and a category search mode based on a category is received, the controller controls searching for a desired content

program from the content program guide information according to the search mode requested (paragraph 78—categories; paragraph 82—text search mode).

Robarts and Lee fail to explicitly teach a proper noun extractor configured to extract at least one proper noun from the detected content program guide information and a proper noun storage configured to store the extracted proper noun.

In analogous art, Hori et al. (“Hori”) teaches a proper noun extractor (Fig. 1—102) configured to extract at least one proper noun from the detected content program guide information and a proper noun storage (Fig. 1—103) configured to store the extracted proper noun (col. 7, lines 14-17 and lines 31-58; col. 8, lines 5-13).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Robarts and Lee by incorporating a proper noun extractor configured to extract at least one proper noun from the detected content program guide information and a proper noun storage configured to store the extracted proper noun, as taught by Hori, in order to extract and store important words such as a proper noun (Hori: col. 7, lines 14-17).

Regarding claim 6, Robarts teaches wherein said digital signal receiver further includes: an information storage configured to store the detected content program guide information (Fig. 5—72). Robarts, however, fails to clearly teach a search term storage configured to store the at least one transmission search term according to the order of priority.



In analogous art, Lee teaches a search term storage (Fig. 1—235) configured to store the at least one transmission search term according to the order of priority (col. 5, lines 1-16—extracted keywords could be ranked based on frequency in which the keyword appeared; col. 5, lines 11-14 and col. 15, lines 17-22—terms that occur with some degree of frequency could be stored in a keyword list).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Robarts by a search term storage configured to store the at least one transmission search term according to the order of priority, as taught by Lee, in order make the number of possible keywords easier to handle and easier to select (Lee: col. 5, lines 1-5).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelton Austin whose telephone number is (571) 272-9385. The examiner can normally be reached on Monday through Thursday from 8:00-5:30. The examiner can also be reached on Fridays from 9:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant, whose telephone number is (571) 272-7294, can be reached on Monday through Friday from 7:30-5:00. The supervisor can also be reached on alternate Fridays from 9:00-4:00. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SWA  
04/12/2008

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Examiner, Art Unit 2623

/Christopher Grant/

Supervisory Patent Examiner, Art Unit 2623